of fine filaments pass from the angle of the carotid, bend between the oculo-motor nerve and the long root of the ganglion to its posterior angle, but the ganglion receives the majority of its sympathetic fibres by way of the path of the oculo-motor, with, as a still further source, the long root of the ganglion. There are, besides, some fine sympathetic fibres that pass over the ganglion, without entering it, and join the ciliary nerves. In these last are to be seen here and there in the vicinity of the ganglion, collections of ganglion cells. In all the cases observed, (some 30), there was to be observed a regressive anastomosis, there were constantly present, going from the ganglion, two or three nerve fibres which wound around one of the adjacent posterior ciliary arteries, and returning toward the centre, were lost in one of the thicker ciliary nerves, or in the ganglion itself. Nerve fibres penetrating, but not joining, the ganglion were not observed.

THE DIVISION PROCESSES IN THE NERVE CELLS. Dietl, *Sitzungb. der k. Akad. des Wissensch.* (absir. in *Rev. des Science Médicales*).—While Koelliker, Beale, Henle, etc, admit the proliferation of the nerve cells in the adult by division of the mother cells, Mayer, and following him, Dietl, consider these processes as improbable. Mayer considers the nerve cells of the sympathetic as a reserve material for the reproduction of the nerve fibres that had become unsuitable for the transmission of the nervous influence. For their development, the nerve cells utilize the figured elements of the blood, notably the red globules. We find in the sympathetic, in the vicinity of the vessels, special elements formed of a fundamental substance, and numerous nuclei, analogous as regards form and micro-chemical reactions to the blood globules. The fundamental substance closing gradually around these nuclei, forms masses of protoplasm, which slowly take on the appearance of nerve cells. These, apolar at first, later present a prolongation, which, uniting itself with one or another cell, forms a nerve fibre. Dietl, from his researches in the gasserian ganglion of the frog, concludes that the opinion of Mayer is well founded, and that the same process takes place, not only in the sympathetic, but also in other ganglia of the body.

THE UNIPOLAR ELECTRIC EXCITATION OF THE NERVES. Chauveau, *C. R. Acad. de Sci.*, Nov., 1875 (abstr. by Math. Duval, in *Rev. des Sciences Médicales*).—In order to realize the condition of unipolar excitation, we place one electrode on one nerve, and the other on another, separated from the first by a portion of the body of sufficient volume to represent a conductor of enormous section, in relation to the reduced section of the animal circuit at the level of the electrodes: we place, for example, in man and the mammals, the electrodes on the two facial nerves, one on the right and the other on the left; in the frog we apply one to the sciatic of one side, and the other to that of the other limb. We have then two simultaneous unipolar excitations, one positive and the other negative.

One of the more important advantages of this unipolar excitation is

that it may be practiced under strictly physiological conditions, impracticable under other conditions. If a superficial nerve is selected, it is not even necessary that it should be exposed: the application of the electrode may be made through the intermediate skin and subjacent parts.

We observe in these cases, 1, that an electric value exists, variable according to the subjects, which gives to the two poles the same degree of activity in the unipolar excitation of the nervo-motor fibres; 2, that below this intensity, equal currents produce unlike effects (the negative pole having the predominance); 3, that above this intensity the positive pole exhibits the greatest activity, and the difference increases regularly with the intensity of the current, if it does not exceed the limits beyond which alterations or exhaustion of the nerves take place.

It is only needful to compare these results which the author now lays down as laws, to see what profound transformations the study of unipolar excitations of the nerves is destined to make, in the general theories of electrotonus and electric excitation.

The following are the titles of some of the recent articles on the anatomy and physiology of the nervous system:

GOLTZ, On the functions of the Cerebrum, *Pfluegers Archiv*, *XII*, *I*, 1; GERGENS, On local vaso-motor centres, *Ibid.* 44; Experiments on reflex action with the influence apparatus, *Ibid.* 61; TIEGEL, Muscular Contracture as opposed to Contraction, *Ibid.*, 71; KOHTS and TIEGEL, The Influence of Section of the Vagus on the Pulse and Respiration, *Ibid.*, 84; STIRLING, Note on the effects of Division of the Sympathetic Nerve of the neck in young animals, *Jour. of Anat. and Phys.*, X, III., April, 1876; BERRY and RUTHERFORD, Note on Pflueger's Law of Contraction, *Ibid.*; BOEHTLING, Note on the vaso-motor nerves, *Stricker's Jahrb.*, 1876, I. 89; BERNSTEIN, Automatic Excitation of the Heart, *Centralbl. f. d. med. Wissensch*, No. 25; Automatic Excitation of the Frog's Heart, *Ibid.*, No. 22; NOTHNAGEL, Irritation and Extirpation of the Cerebellum, *Ibid.*, No. 21.